# Creating and Managing a Web Site with Lotus' InterNotes Web Publisher

*by Paul J. Grous*

Long before the Lotus InterNotes products that I'll be discussing in this article made their debut, Notes was already an application ideally suited for the Internet. Notes supports TCP/IP as one of it's native protocols. This means that a Notes Client with a SLIP, PPP or direct connection to the Internet can access a Notes Server via the Internet using the TCP network driver. Likewise, Notes Servers can also replicate with each other in the same manner. Notes' encryption allows a secure means of communicating over the Internet, a public network.

If a Notes Client needs to access multiple servers, a single phone call to the Internet access provider is all that's needed and multiple Notes Servers can be accessed simultaneously. A Notes Server can service multiple connections instead of a single connection using a dial-up telephone line. Telephone charges can be significantly reduced, in some cases by as much as 80%, by using the Internet as a transport instead of long distance phone calls. Higher throughput can be achieved by using ISDN or leased line access.

Another way Notes exploited the Internet prior to InterNotes is the Notes SMTP gateway, which allows e-mail to be transferred between the Internet and a Notes user via the Simple Mail Transfer Protocol (SMTP) protocol.

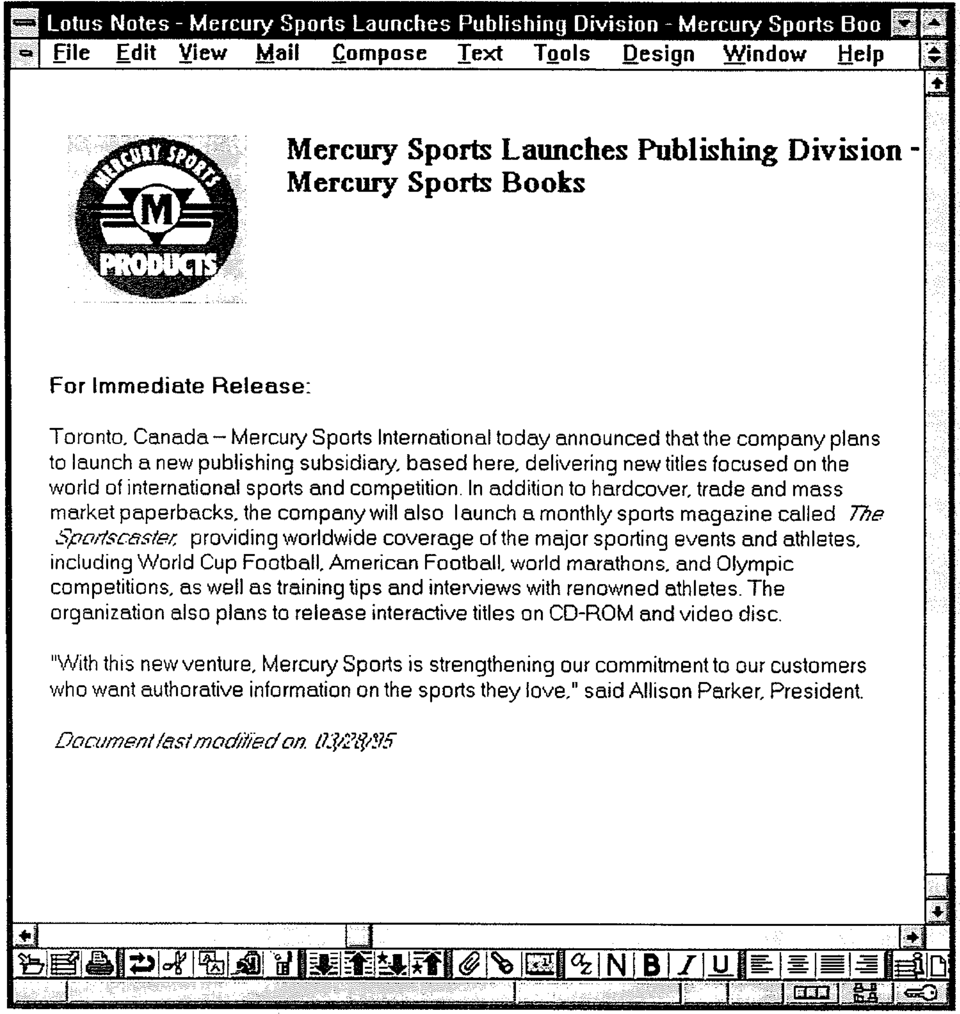
Lotus InterNotes is a family of new products that leverages Notes' groupware capabilities and extends its reach to the Internet. The first two InterNotes products, available now, are:

- **Lotus InterNotes Web Publisher**, a Notes Server addin task that automatically publishes selected Notes databases into HyperText Markup Language (HTML), the file format used by World Wide Web (WWW) browsers and servers.

- **Lotus InterNotes News**, a Notes Server addin task that automatically populates Notes databases with Usenet News articles from subscribed newsgroups. InterNotes News also allows posting and replies to newsgroups, and individual replies via e-mail.

This article highlights the InterNotes Web Publisher, which when combined with Notes' groupware strengths solves many real problems that a Webmaster faces today. For example, in a large organization, no single person owns all the information. It's a daunting task for the person charged with the responsibility of collecting information to be published on a web site, particularly if there are many authors and they are geographically dispersed. It's even more problematic when it comes time to update the information in a timely manner! Typically, when a web site is installed

Figure 1 ***Original Document in Notes***


Lotus Notes - Mercury Sports Launches Publishing Division - Mercury Sports Boo
File Edit View Mail Compose Text Tools Design Window Help
MERCURY SPORTS
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PRODUCTS
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**Mercury Sports Launches Publishing Division - Mercury Sports Books**

For Immediate Release:

Toronto, Canada – Mercury Sports International today announced that the company plans to launch a new publishing subsidiary, based here, delivering new titles focused on the world of international sports and competition. In addition to hardcover, trade and mass market paperbacks, the company will also launch a monthly sports magazine called *The Sportscaster,* providing worldwide coverage of the major sporting events and athletes, including World Cup Football, American Football, world marathons, and Olympic competitions, as well as training tips and interviews with renowned athletes. The organization also plans to release interactive titles on CD-ROM and video disc.

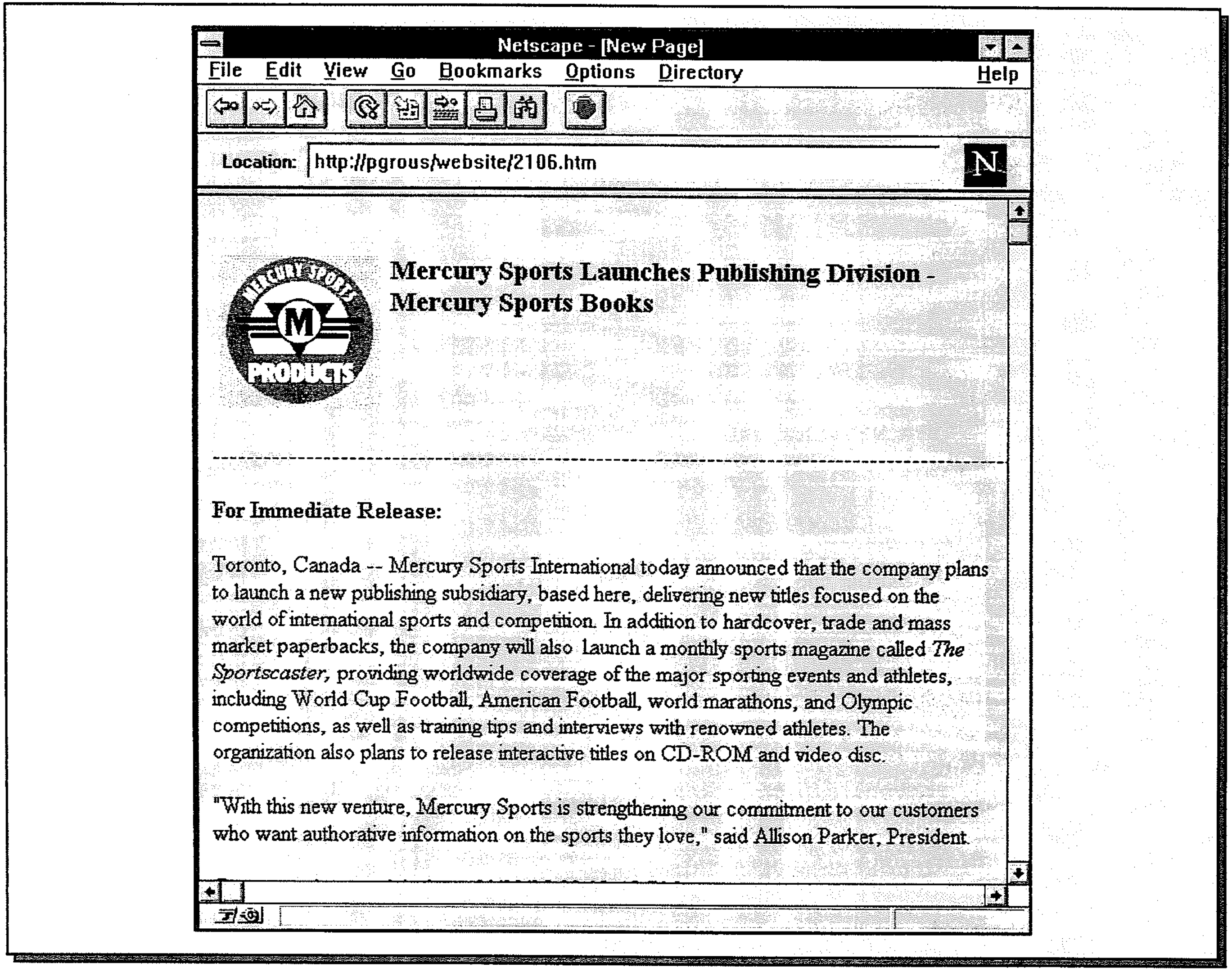
"With this new venture, Mercury Sports is strengthening our commitment to our customers who want authorative information on the sports they love," said Allison Parker, President.

*Document last modified on: 03/28/95*

on the Internet, all parts of the organization want to publish information on it, such as press releases, public documents, contact information, job postings, technical support, calendars, and so forth. Approving what information goes on the web site becomes another major problem. Since your web site becomes your company's "electronic public face", you need to control who can publish information to it. But the biggest problem that is most unforeseen by the uninitiated (but experienced Webmasters know this is true!) is the problem of link management. For every HTML page you publish, you need to edit at least one other in order to link to it or else no one will know it's there! Let's not forget the fact that your content authors have to learn this new file format called HTML. Fortunately, Notes and the Web Publisher address all of these problems!

> ***Since your web site becomes your company's "electronic public face", you need to control who can publish information to it.***

Figure 2 *Document Represented in Netscape - A Web Browser*


Netscape - [New Page]
File Edit View Go Bookmarks Options Directory Help
Location: http://pgrous/website/2106.htm
N
MERCURY SPORTS
M
PRODUCTS

**Mercury Sports Launches Publishing Division - Mercury Sports Books**

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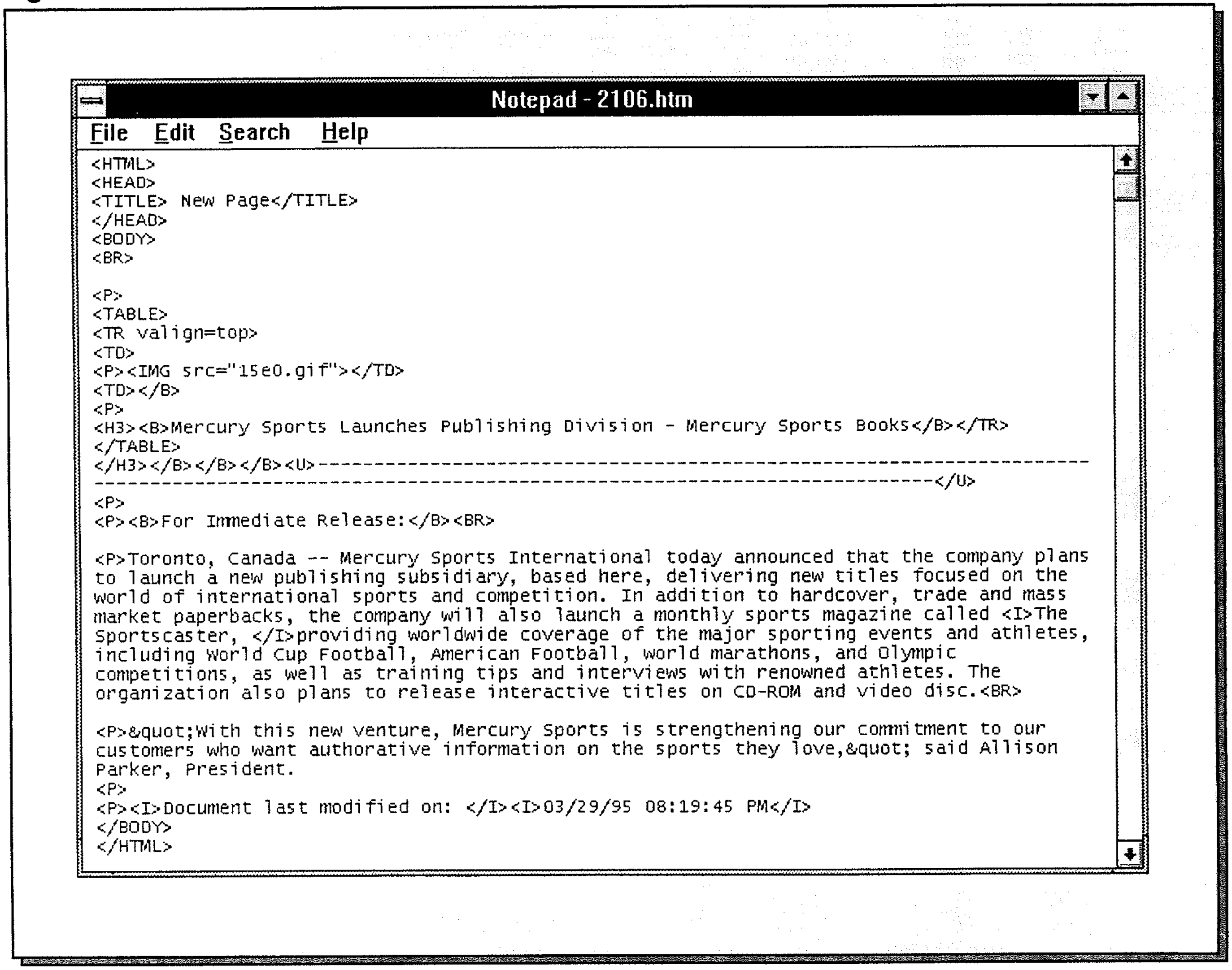
"With this new venture, Mercury Sports is strengthening our commitment to our customers who want authorative information on the sports they love," said Allison Parker, President.

I'll begin with an overview of the Web Publisher architecture, then provide a more detailed explanation of the addin and its associated databases. We'll examine, by examples, how each component of a Notes database maps into HTML. Finally, some strategies for using Web Publisher to create and maintain an enterprise web site are discussed. For more information on configuring Notes to run over the Internet, see the Lotus Notes Internet Cookbook, which is an online document found on the Lotus web server at **http://www.iris.com/cbook.html**.

## Product Overview

InterNotes Web Publisher is a Notes Server addin task that runs on a Windows NT Notes Server. Web Publisher is a powerful utility which automatically creates and updates HTML pages on your web site from data stored in Notes databases. **Figure 1** shows an example of a typical Notes document. **Figure 2** shows that same document when viewed in a web browser after Web Publisher converted it to an HTML page.

**Figure 3** ***Actual HTML File Created by Web Publisher***



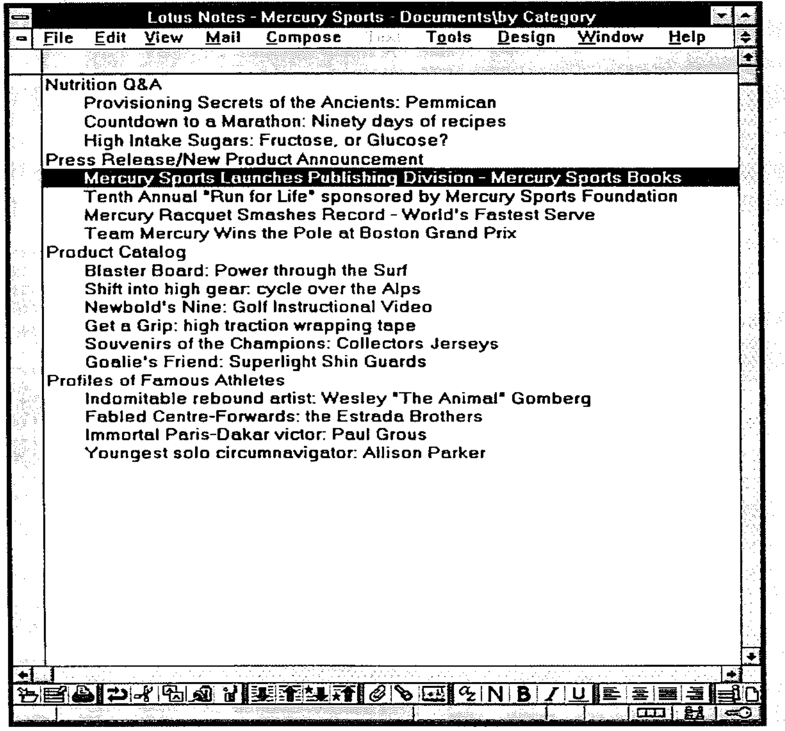
```
<HTML>
<HEAD>
<TITLE> New Page</TITLE>
</HEAD>
<BODY>
<BR>

<P>
<TABLE>
<TR valign=top>
<TD>
<P><IMG src="15e0.gif"></TD>
<TD></B>
<P>
<H3><B>Mercury Sports Launches Publishing Division - Mercury Sports Books</B></TR>
</TABLE>
</H3></B></B></B><U>------------------------------------------------------------------
------------------------------------------------------------------------</U>
<P>
<P><B>For Immediate Release:</B><BR>

<P>Toronto, Canada -- Mercury Sports International today announced that the company plans
to launch a new publishing subsidiary, based here, delivering new titles focused on the
world of international sports and competition. In addition to hardcover, trade and mass
market paperbacks, the company will also launch a monthly sports magazine called <I>The
Sportscaster, </I>providing worldwide coverage of the major sporting events and athletes,
including World Cup Football, American Football, world marathons, and Olympic
competitions, as well as training tips and interviews with renowned athletes. The
organization also plans to release interactive titles on CD-ROM and video disc.<BR>

<P>&quot;With this new venture, Mercury Sports is strengthening our commitment to our
customers who want authorative information on the sports they love,&quot; said Allison
Parker, President.
<P>
<P><I>Document last modified on: </I><I>03/29/95 08:19:45 PM</I>
</BODY>
</HTML>
```

**Figure 3** shows the actual HTML file. Notes views are maintained and mapped into HTML pages with links to the appropriate pages, as shown in **Figure 4** and **Figure 5**. Attachments, inline graphics, multimedia objects, rich text, and formatting are all maintained as well.

Data can be authored a single time, in Notes, and then converted into HTML without massive manual recoding into HTML. Web Publisher converts any existing Notes database.

An HTTP server is *not* included with the Web Publisher. Technically, none is even required! Web Publisher creates HTML based on Notes databases and publishes it to the file system. This allows flexibility in terms of load balancing of the Notes Server and the HTTP server. It also allows any HTTP server to be used, so long as it has access to the HTML files created by the Web Publisher. This also permits local publishing to preview the look and feel of your web site before opening general access to the public.

Figure 4 *A Typical Notes View*



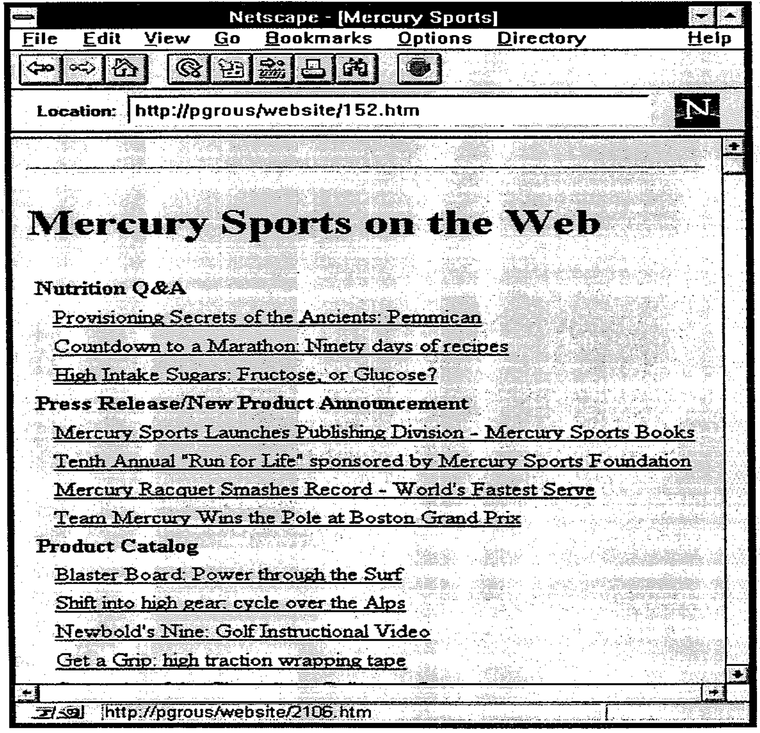
Nutrition Q&A
- Provisioning Secrets of the Ancients: Pemmican
- Countdown to a Marathon: Ninety days of recipes
- High Intake Sugars: Fructose, or Glucose?

Press Release/New Product Announcement
- Mercury Sports Launches Publishing Division - Mercury Sports Books
- Tenth Annual "Run for Life" sponsored by Mercury Sports Foundation
- Mercury Racquet Smashes Record - World's Fastest Serve
- Team Mercury Wins the Pole at Boston Grand Prix

Product Catalog
- Blaster Board: Power through the Surf
- Shift into high gear: cycle over the Alps
- Newbold's Nine: Golf Instructional Video
- Get a Grip: high traction wrapping tape
- Souvenirs of the Champions: Collectors Jerseys
- Goalie's Friend: Superlight Shin Guards

Profiles of Famous Athletes
- Indomitable rebound artist: Wesley "The Animal" Gomberg
- Fabled Centre-Forwards: the Estrada Brothers
- Immortal Paris-Dakar victor: Paul Grous
- Youngest solo circumnavigator: Allison Parker

Figure 5 *View After HTML Conversion*



Location: http://pgrous/website/152.htm

# Mercury Sports on the Web

**Nutrition Q&A**
- Provisioning Secrets of the Ancients: Pemmican
- Countdown to a Marathon: Ninety days of recipes
- High Intake Sugars: Fructose, or Glucose?

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- Get a Grip: high traction wrapping tape

http://pgrous/website/2106.htm

**Figure 6** illustrates the flow of content when published from Notes into HTML. Working from left to right, you can see that content is created by any Notes Client and saved in databases on any Notes Server. The databases are then replicated through a firewall to another Notes Server running Web Publisher. In this example, the same machine is also running an HTTP server. This machine has a full time TCP/IP connection to the Internet, where Web browsers on all platforms can access and read the HTML pages published on the HTTP server. Web Publisher automatically updates information on your web site and keeps the HTML in sync with the Notes databases.

Note that there are several HTTP servers that support Windows NT, including:

- Netsite by Netscape Communications (http://www.netscape.com)
- WebSite by O'Reilly & Associates (http://website.ora.com)
- Purveyor by Process Software (http://www.process.com)
- EMWAC by the University of Edinburgh (http://www.emwac.ed.ac.uk)

## InterNotes Web Publisher Architecture

The Web Publisher software takes Notes data as input and writes HTML files as output. It runs as a Notes Server addin process that automatically converts databases according to the schedule and the options you set for each database.

Once started on the Notes Server, the addin accesses three types of Notes databases:

- **The Web Publisher Configuration Database:** This database (WEBCFG.NSF) contains information on the web site overall, as well as specific information for each database to be published.
- **The Web Publisher Log Database:** This database (WEBLOG.NSF) serves as an audit trail which logs information on databases that are published, and details on each publication.
- **Content Databases:** These are the databases that are specified in the Web Publisher Configuration database to be translated from Notes into HTML.

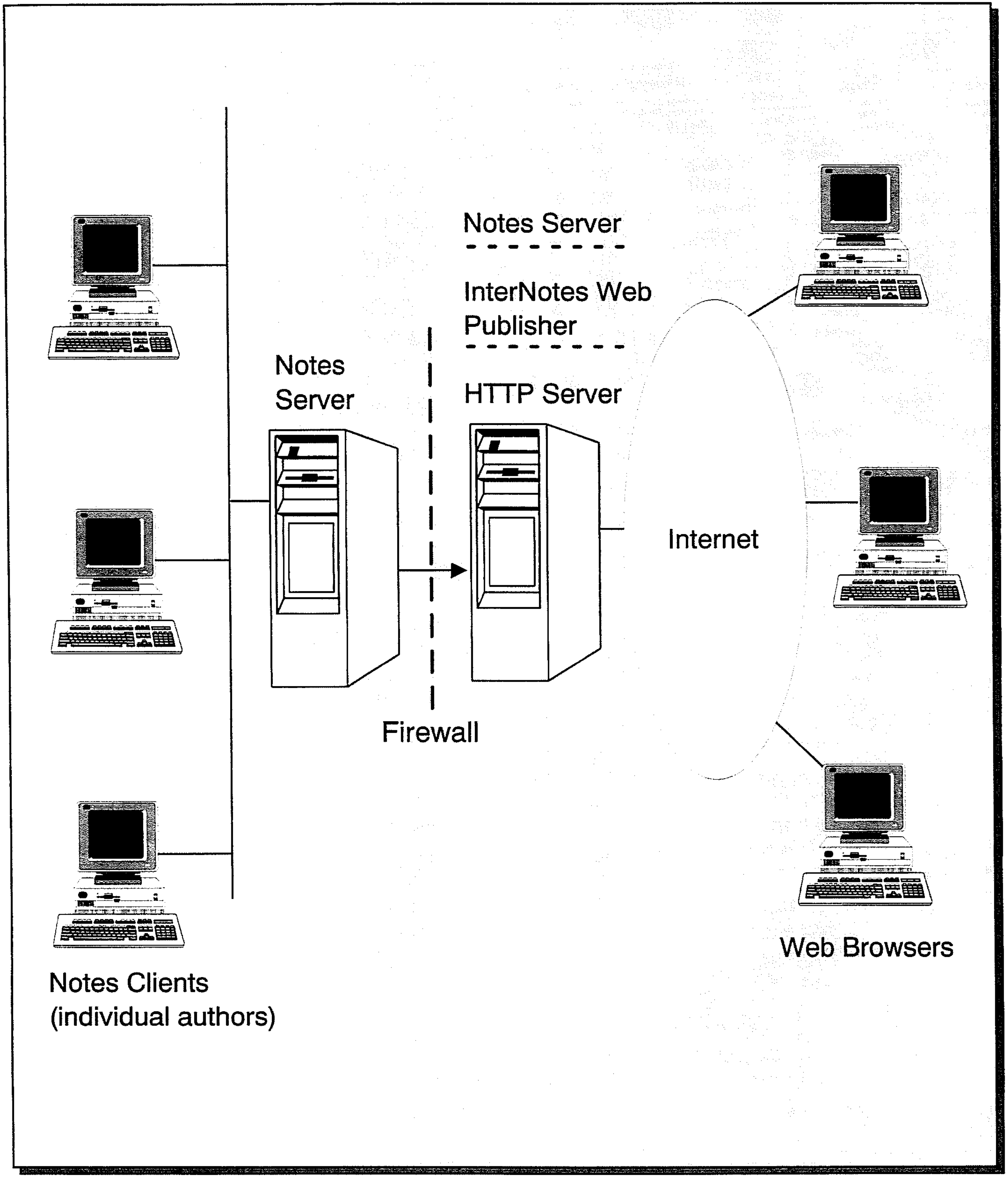
When started, the server addin will first open WEBCFG.NSF in order to read options for the web site overall, such as where to write the HTML files. The addin will then poll the Database Publishing Records in WEBCFG.NSF to see if any databases are scheduled to be translated at the given time. If so, a database translation occurs, and a log entry is entered in WEBLOG.NSF to record the translation status and results. The addin will run continuously until the **TELL WEBPUB QUIT** command is issued on the Notes Server console, or the Notes Server is shutdown. Databases can be scheduled to publish only the parts of the database that change, instead of translating the entire database that was previously converted.

Now, let's take a closer look at the Web Publisher databases.

## Web Publisher Configuration Database

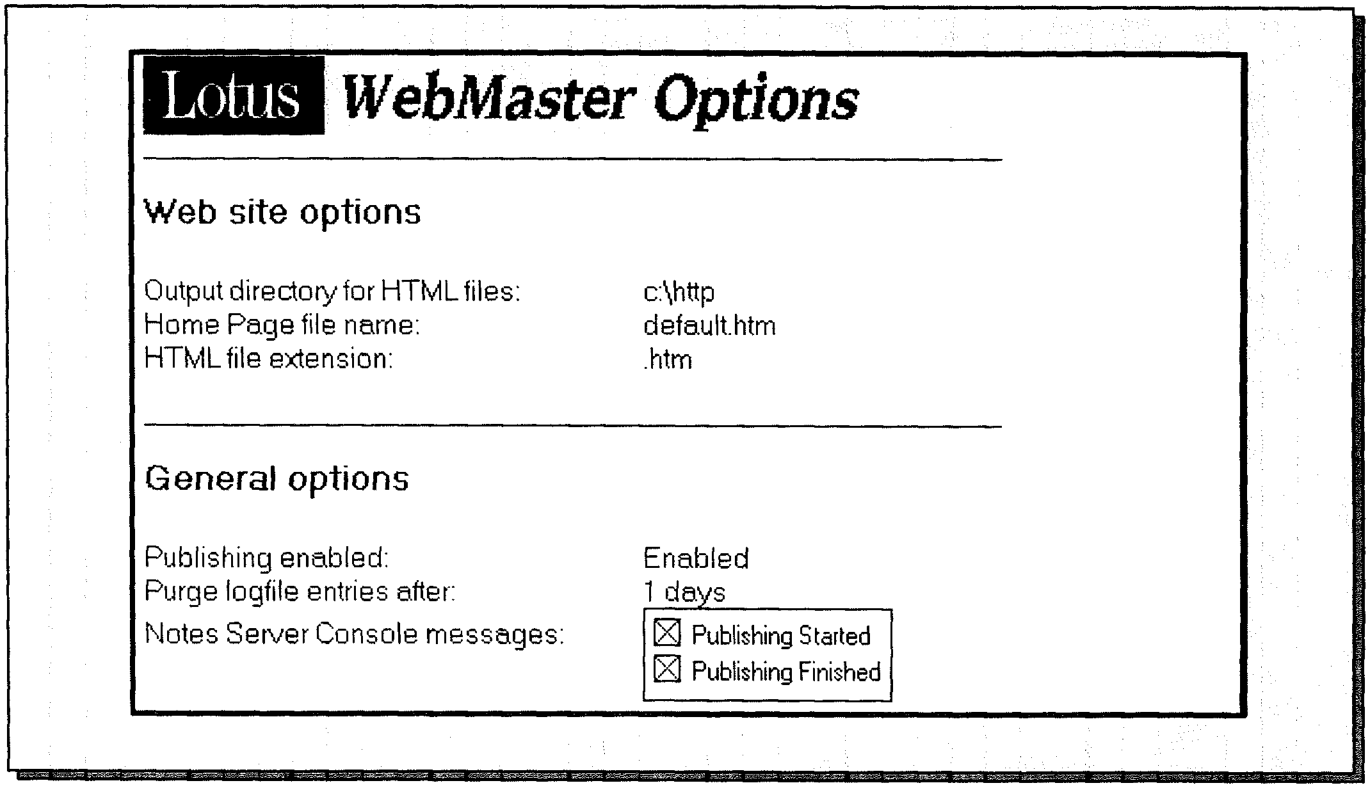
The first database we'll look at is the Web Publisher Configuration Database. This database uses the familiar Notes interface for configuring the Web Publisher which means the administrator won't have to learn another application's interface. Using Notes also allows the product to be administered remotely and on any platform on which the Notes Client runs. Information specific to the web site overall, and options specific to each content database, is stored here.

**Figure 6** ***Publishing From Notes to the Internet***



*No portion of this publication may be copied without written consent.*

**Figure 7** ***WebMaster Options Document***



Lotus **WebMaster Options**

Web site options

Output directory for HTML files: c:\http
Home Page file name: default.htm
HTML file extension: .htm

General options

Publishing enabled: Enabled
Purge logfile entries after: 1 days
Notes Server Console messages: ☒ Publishing Started
☒ Publishing Finished

Administrative control can be exercised by modifying the Access Control List (ACL) on this database to restrict only those who are authorized to create content. Additionally, each content database has an ACL. This offers controlled flexibility when "farming out" the authoring of the content throughout the organization. You may desire users in one department to have or not to have the ability to edit content in another department's database.

There are two forms in the Web Publisher Configuration Database:

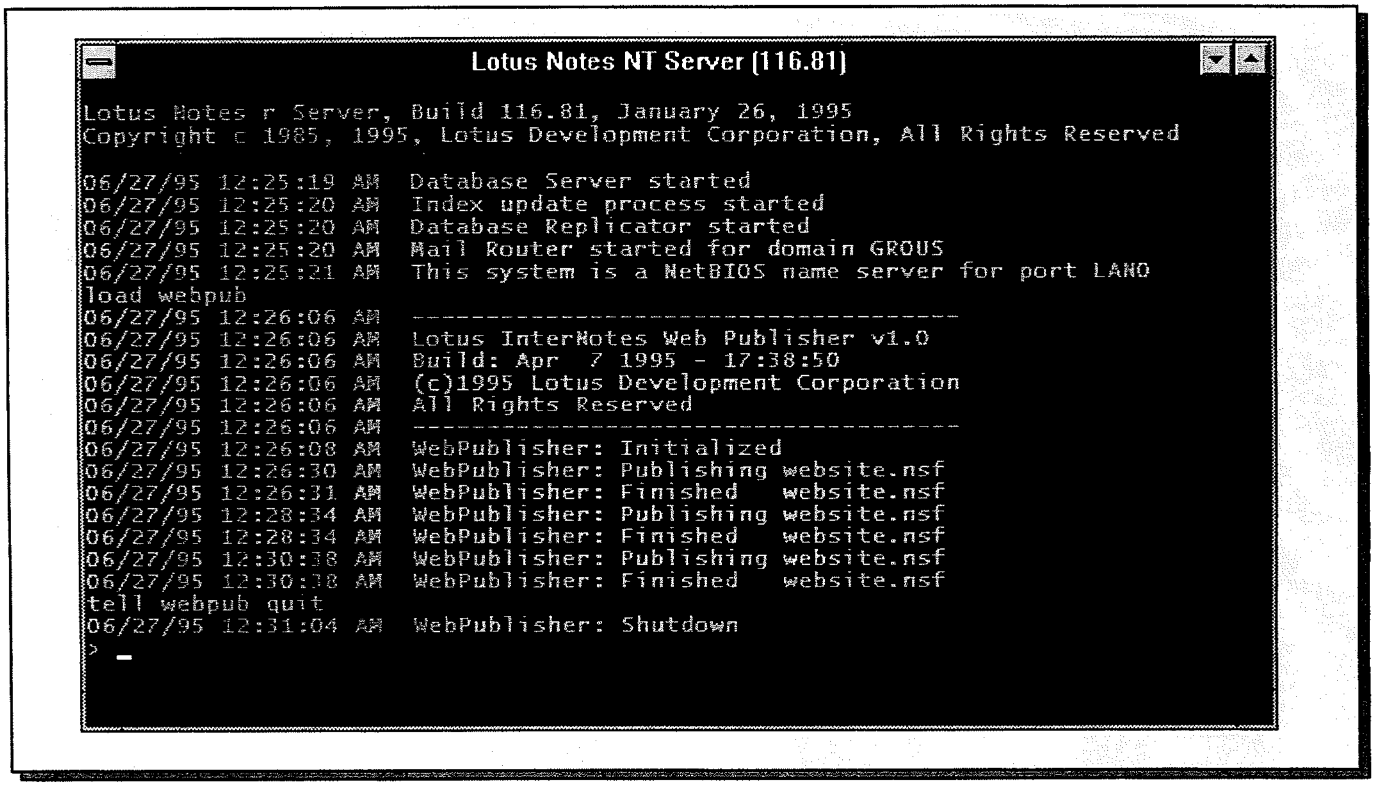
- **WebMaster Options Document**
- **Database Publishing Record**

The **WebMaster Options Document** is used to configure information on the web site overall. It is not specific to a database, or any particular page, but rather specific to the entire site. There should only be one WebMaster Options Document. **Figure 7** shows an example.

Let's look at this form field by field. The **Output directory for HTML files** field tells Web Publisher which directory is the base directory for the HTML output. Each content database will be published into its own subdirectory under this base directory. If the HTTP server is not running on the same machine as the Notes Server, this directory can reside on a file server or on another machine on the network.

Since HTTP servers use different filenames for the default page of a directory, the **Home Page file name** setting allows you to set this to match your HTTP server's default page name. The default page is used when only a directory is specified in the browser without a specific page's filename. For example, **http://www.lotus.com/** will return **default.htm** since no specific filename was specified in the URL. The default page is also referred to as the "home page of a database". Each content database uses the Notes database's **Help...About** page as the home page of the database.

**Figure 8** ***Notes Server Console Messages***



Lotus Notes NT Server (116.81)

```
Lotus Notes r Server, Build 116.81, January 26, 1995
Copyright c 1985, 1995, Lotus Development Corporation, All Rights Reserved

06/27/95 12:25:19 AM  Database Server started
06/27/95 12:25:20 AM  Index update process started
06/27/95 12:25:20 AM  Database Replicator started
06/27/95 12:25:20 AM  Mail Router started for domain GROUS
06/27/95 12:25:21 AM  This system is a NetBIOS name server for port LAN0
load webpub
06/27/95 12:26:06 AM  ------------------------------------
06/27/95 12:26:06 AM  Lotus InterNotes Web Publisher v1.0
06/27/95 12:26:06 AM  Build: Apr  7 1995 - 17:38:50
06/27/95 12:26:06 AM  (c)1995 Lotus Development Corporation
06/27/95 12:26:06 AM  All Rights Reserved
06/27/95 12:26:06 AM  ------------------------------------
06/27/95 12:26:08 AM  WebPublisher: Initialized
06/27/95 12:26:30 AM  WebPublisher: Publishing website.nsf
06/27/95 12:26:31 AM  WebPublisher: Finished   website.nsf
06/27/95 12:28:34 AM  WebPublisher: Publishing website.nsf
06/27/95 12:28:34 AM  WebPublisher: Finished   website.nsf
06/27/95 12:30:38 AM  WebPublisher: Publishing website.nsf
06/27/95 12:30:38 AM  WebPublisher: Finished   website.nsf
tell webpub quit
06/27/95 12:31:04 AM  WebPublisher: Shutdown
> _
```

HTTP servers use different filename extensions, so in the **HTML file extension** field, you must specify which extension is used in your HTTP server or file system. This field is usually **.HTM** or **.HTML**. Don't forget to include the leading "**.**" (period).

Under the **General Options** section, you can temporarily disable or enable publishing of all content databases by toggling the **Publishing enabled** field. You might want to disable publication if you are performing some maintenance on your web site. No publishing will occur while this field is set to "Disabled".

The Web Publisher log file has the potential to grow quickly, particularly if databases are published several times per hour. Use the **Purge logfile entries after** field to automatically purge entries whose ages are greater than the specified number of days.

The **Notes Server Console messages** field controls which messages are written to the Notes Server's console. You can display a message when a database has started publishing, finished publishing, both, or neither. See **Figure 8** for an example of the Notes console messages.

***You can temporarily disable or enable publishing of all content databases by toggling the "Publishing enabled" field. You might want to disable publication if you are performing some maintenance on your web site. No publishing will occur while this field is set to "Disabled".***

The second form in the Web Publisher Configuration Database, the **Database Publishing Record**, is used to configure options specific to each content database. There is one record for each content database. **Figure 9** shows an example.

The Notes Server name and database name are specified in the **Notes database to publish** section. The content database is not required to reside on the Notes Server running the Web Publisher, however, if the database is on a remote server, the server running Web Publisher needs at least Reader access in order to open, read, and publish the database into HTML. If the **Notes server name** field is blank, as is the case in Figure 9, the server where the Web Publisher Configuration Database (WEBCFG.NSF) resides is the server name used.

The **Scheduling information** section controls how often to publish the content database into HTML. Databases that change frequently can be set to publish once per hour, or even once per minute, depending on how often the information changes. Setting this value to a small interval does not significantly impact performance since only changes since the last publication are processed. The **Publishing status** field can override this, however, by setting it to "All Documents" for instances where time based formulas are used in views, such as a selection formula for the past day's or past hour's documents. **Publishing status** can also be set to "Remove from Web site" if you want to delete the HTML from your web site. Publishing of the database can also be set to "Disable" if you want to stop publishing the database or if it was a one time only publication.

***The "Scheduling information" section controls how often to publish the content database into HTML. Databases that change frequently can be set to publish once per hour, or even once per minute, depending on how often the information changes. Setting this value to a small interval does not significantly impact performance since only changes since the last publication are processed.***

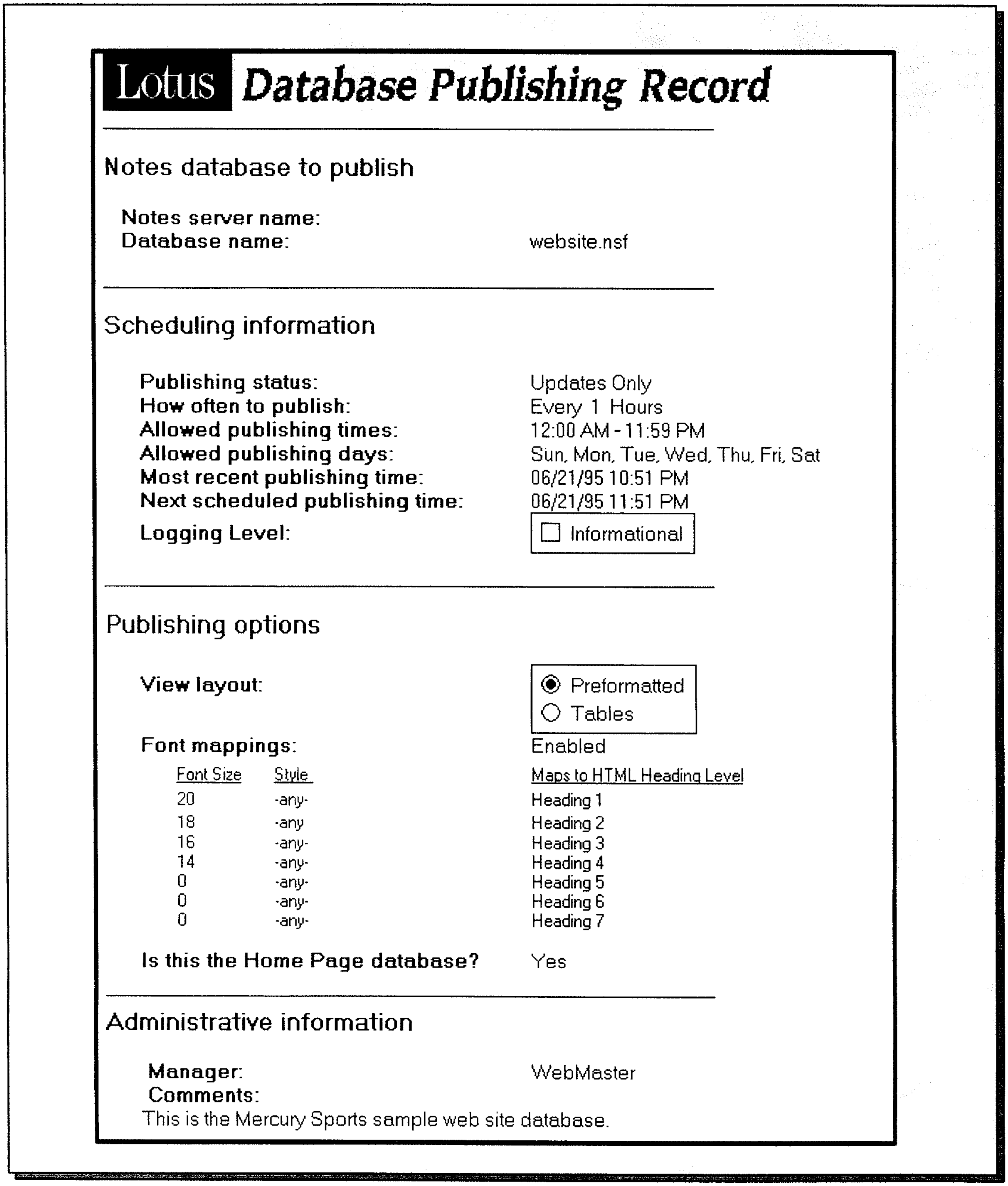
The frequency and interval between database publications can be set using **the How often to publish** field. The **Allowed publishing times** and **Allowed publishing days** fields allow you to control which times and days the database will be published. For large, relatively static databases, you might want to schedule them to be translated only once per week, on a weekend, or in the middle of the night. The **Most recent publishing time** and **Next scheduled publishing time** are computed by Web Publisher and are not editable fields. They are provided for use in views selection and sorting, as well as a quick way to see the last time a database was published or the next time it will be published.

The **Logging Level** field should only be checked when told to do so by Technical Support in order to provide extra information about a problem. Normally, you'll leave this option unchecked.

The **Publishing options** section allows you to control the layout of the HTML pages. The **View layout** field gives you the choice of how views will appear and which HTML tags are used when the HTML page for a view is created. There are two choices: "Preformatted" and "Tables". In both options, the layout of the view columns are maintained. Preformatted is an HTML term used to represent a fixed typeface. Using a fixed font for views allows the columns to be aligned properly by allocating a certain number of characters per column. However, the fixed font is not too aesthetic in some cases. The Tables option uses a visually pleasing proportional font and makes use of HTML tables (with borders turned off) in order to align and automatically wrap columns. This is the default option, however some browsers don't yet support HTML tables.

The **Font mappings** fields tells the Web Publisher to use the specified fonts and add the appropriate HTML heading tags when that font appears in the Notes document. The font mappings are specified as size ranges and styles. In Figure 9, fonts of any style (ie: bold, italic, normal) that are 20 points or greater are mapped into HTML's Heading 1. Fonts 18 through 19

**Figure 9** ***Database Publishing Record***



Lotus **Database Publishing Record**

Notes database to publish

|  |  |
|---|---|
| **Notes server name:** | |
| **Database name:** | website.nsf |

Scheduling information

|  |  |
|---|---|
| **Publishing status:** | Updates Only |
| **How often to publish:** | Every 1 Hours |
| **Allowed publishing times:** | 12:00 AM - 11:59 PM |
| **Allowed publishing days:** | Sun, Mon, Tue, Wed, Thu, Fri, Sat |
| **Most recent publishing time:** | 06/21/95 10:51 PM |
| **Next scheduled publishing time:** | 06/21/95 11:51 PM |
| **Logging Level:** | □ Informational |

Publishing options

**View layout:** ● Preformatted ○ Tables

**Font mappings:** Enabled

| Font Size | Style | Maps to HTML Heading Level |
|---|---|---|
| 20 | -any- | Heading 1 |
| 18 | -any | Heading 2 |
| 16 | -any- | Heading 3 |
| 14 | -any- | Heading 4 |
| 0 | -any- | Heading 5 |
| 0 | -any- | Heading 6 |
| 0 | -any- | Heading 7 |

**Is this the Home Page database?** Yes

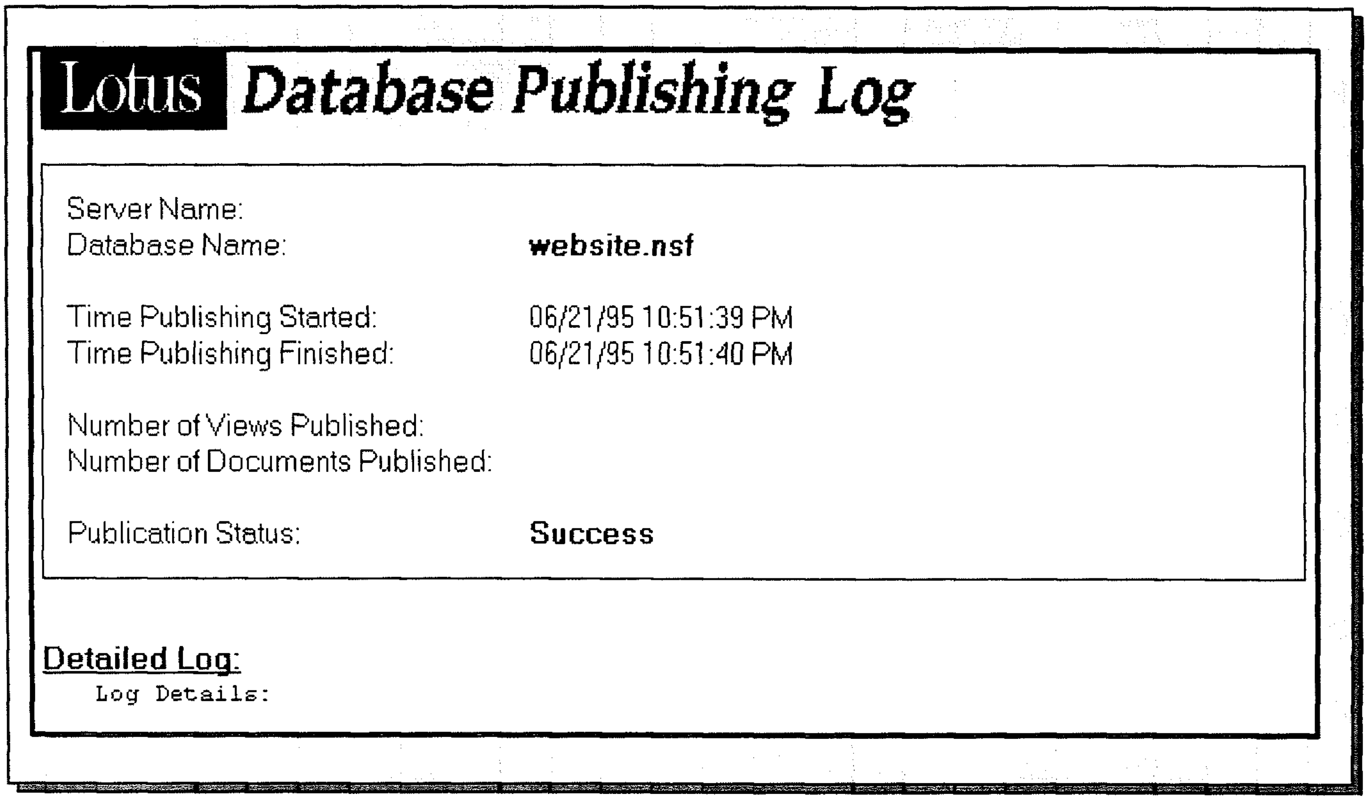
Administrative information

**Manager:** WebMaster

**Comments:**

This is the Mercury Sports sample web site database.

**Figure 10** ***Database Publishing Log***



Lotus **Database Publishing Log**

| | |
|---|---|
| Server Name: | |
| Database Name: | **website.nsf** |
| Time Publishing Started: | 06/21/95 10:51:39 PM |
| Time Publishing Finished: | 06/21/95 10:51:40 PM |
| Number of Views Published: | |
| Number of Documents Published: | |
| Publication Status: | **Success** |

**Detailed Log:**

```
Log Details:
```

points are mapped into Heading 2, and so on. The value "0" indicates font mapping is disabled for that heading level. Font mappings maintain the fidelity of a document being published, since heading titles in Notes are highlighted in HTML using the Heading tags. When this feature is disabled, all text will appear in the default font, usually set by the browser, which is typically a 12 point proportional font.

Each database has a database home page (the About page). This HTML page is named using the default page name, which means if you simply type the subdirectory name (which is based on the database name), that's the page that will be returned. However, your site needs a default page (also called the home page or front page) if the user simply types in a URL with your machine name but no file name. An example would be **http://www.lotus.com**, where **default.htm** in the base HTML directory will be returned. In order to create this page, one and only one database must be marked as the "home page database". This is accomplished when the **Is this the Home Page database?** field is set to "Yes".

The **Administrative information** section contains two informational fields, **Manager** and **Comments**, that are not required nor processed by Web Publisher.

## *Web Publisher Logging Database*

The next database we'll look at is the **Web Publisher Logging Database**. This database is simply an audit trail that logs information about published databases. The documents in this database are populated by the Web Publisher addin and purged according to the setting in the Webmaster Options Document.

There is a single form in this database, the **Database Publishing Log**, shown in **Figure 10**. This form contains the server name and database name for a database that was published. The **Server Name** field will be blank if it was blank in the Database Publishing Record. In **Figure 10**, this is the case. It also contains the date and time publishing started and finished. **The Number of Views Published** is blank if no views were published, usually because the database hasn't changed since last publication. Otherwise, this field will contain the number of views published. The **Number of Documents Published** field works in the same manner. The **Publication Status** will be one of two values: "Success" or "Failure". If this field is set to "Failure", further information can be found in the **Detailed Log** field. The **Detailed Log** field is also used if the Database Publishing Record for this database is set to "Informational logging".

The Log database can be used to track databases which are published. Several views are included that allow you to see the log based on time, Database Name, Server Name or publication status. The Log database can grow quickly if you publish a large number of databases or have short intervals between publications. Therefore, the Log database is automatically purged according to the setting in the **General Options** section of the Webmaster Options Document. Log entries older than the specified number of days will be removed.

When you view the log file, you want to look for any entries that have a status of **Failure**. This indicates a problem that may have caused the database to not be published. It might be as simple as the Notes Server where the database resides was temporarily inaccessible; or it could be more serious. The **Detailed Log** section will display information as to what caused the failure.

## Content Databases

The third type of database we'll look at are **Content Databases**. These are the Notes databases that contain the documents you want to publish to the World Wide Web. These databases do not have to be specially formatted for the Web; any database will translate. Typically, however, you will want to do some minor design work to get the look and feel just right for viewing with a web browser.

The hierarchy of a Notes database maps very well into the Web's hierarchy. Published HTML pages look very much like they do in Notes. Notes views are maintained and automatically mapped into HTML pages with links to the documents in that view. Attachments are preserved. Bitmaps in Notes documents are translated into inline GIF images. Multimedia objects, rich text, and styles are maintained. Notes tables are converted into HTML tables. Form layout is preserved. Notes doclinks automatically become hypertext links in HTML and OLE embedded files are preserved. Unique HTML filenames are automatically generated based on the note IDs. The generated filenames can be overridden with a user specified filename by including a field called **HTMLFile.**

The Web Publisher allows you to specify URLs in several ways. The recommended way to link to other Notes documents is by using Notes doclinks.

***The hierarchy of a Notes database maps very well into the Web's hierarchy. Published HTML pages look very much like they do in Notes. Notes views are maintained and automatically mapped into HTML pages with links to the documents in that view. Attachments are preserved. Bitmaps in Notes documents are translated into inline GIF images. Multimedia objects, rich text, and styles are maintained. Notes tables are converted into HTML tables. Form layout is preserved. Notes doclinks automatically become hypertext links in HTML and OLE embedded files are preserved.***

**Figure 11** illustrates several examples of how linking is accomplished in Notes, and how they look in a Web browser.

The HTML Passthrough feature of Web Publisher allows you to use HTML features that are not supported directly by Notes, such as the Netscape HTML extension for blinking text, **<blink>**. Any HTML tags and text can be enclosed between brackets, **“[”** and **“]”**. The Web Publisher will not attempt to translate anything in between the brackets. For example, to make some text blink, you could include the following text in your Notes document:

> **The words [<blink>]blinking text [</blink>] in this sentence should be blinking.**

and it would appear the same way in the Web browser, except the bracketed text won't appear, and the words “**blinking text**” will be blinking if your browser supports that tag.

> **The words blinking text in this sentence should be blinking.**

The HTML Passthrough feature is particularly useful when employed by view column formulas. Notes formulas can be combined with values stored in Notes fields to create applications that would typically require tremendous amounts of hand editing. For example, many web sites include a little “**new**” or “**updated**” graphic to point out that new information has been posted or updated. These are particularly easy to do with Notes formulas in a view. A view column, for example, might contain the following formula:

> **@If(@Modified > @Yesterday; “ [<img src=new.gif>]”; “”)**

This will insert an HTML tag to include the “**new**” graphic for any document created in the past day.

In general, the goal of Web Publisher is to create HTML that closely matches how the document appears in Notes. The Web Publisher sample database contains examples of these features, as well as a toolkit of useful tips and techniques.

## *Strategies for Collaborative Publishing*

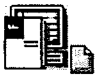
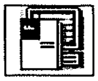
Notes is a great tool for collaborative sharing of information. Since the organization's information is distributed, Notes and InterNotes is the perfect vehicle for gathering and updating a web site. There are several ways to use Notes' power to collect and maintain the data for the web site.

One possible way to manage the process is to have one set of databases that are published. Authors of the content must have proper access to update information. These Notes databases can be replicated to several different geographical locations, or even to a user's laptop. Content can be authored on the local replicas, and when finished can be replicated back to the master set of databases that are to be published to the web. This aspect of an enterprise solution should not be underestimated. Notes provides a level of security and flexibility for this process that is not present in any other software.

Another possible solution to an enterprise web site is to actually have multiple sites that share the same content, all based on the same Notes databases. Notes replication is the ideal way to update multiple sites automatically. This method is primarily used in situations where load balancing is a concern. For example, a very popular web site that will receive many requests, might consider storing the data on multiple web servers instead of a single server. A good example of this would be a large company that has a large number of products, where keeping all of the data on one server would result in so many requests that the server would start to suffer sluggish performance. Notes and Web Publisher allow you to distribute the data to servers in an easy way.

At Lotus, we use the first method described above. Data is created across the company and replicated onto a staging server on the local LAN. Using a workflow process in Notes, the data is approved for publication to the web. They are then published on the staging server. Once the HTML appears as desired, the Notes data-

Figure 11 *Methods of Specifying URL's*

| Description | What it looks like in Notes | What it looks like in WWW Browser |
|---|---|---|
| Use a regular Notes doclink to link to another Notes document. In this case, a small doclink icon will be the hotspot in the browser for the hypertext link. | Click here for more information --> 📄 | Click here for more information --> 📄 |
| Select a portion of text, underline it, and immediately follow it with a Notes doclink. The underlined text will become the hotspot in the browser, and no doclink icon will appear. | Click here for information📄 | Click here for information |
| Paste a graphic image into a rich text field, and immediately follow it with a Notes doclink. This will cause the graphic image to become the hotspot and no doclink icon will appear in the browser. |  | |
| To create an external URL (ie: a non-Notes document), underline some text, and follow it immediately by a square bracket, followed by the URL, followed by an ending square bracket. The underlined text becomes the hotspot in the browser. The square brackets and the text inside them does not appear in the browser. | Click here for the Lotus Web Site[http://www.lotus.com] | Click here for the Lotus Web Site |
| Another way to create an external URL (ie: a non-Notes document) is to use a popup text around some text by using Edit...Insert PopUp. The same square bracket syntax described above is used as the popup text window's text to represent the URL. | Click here for the Lotus Web Site<br>Note: The popup text window contains:[http://www.lotus.com] | Click here for the Lotus Web Site |
| A graphic image can have a popup window as well. So, inserting a graphic, and using Edit...Insert PopUp to create a popup window around the graphic is another way to enter a URL. The same square bracket syntax is used as described above. The entire graphic is the hotspot in the browser. | <br>Note: The popup text window contains:[http://www.lotus.com] | |
| Relative URL's can be used in place of an Explicit URL. Relative URL's don't specify the entire URL, but rather it's a URL that refers to a page that's relative to the current page. In this example, product.htm is a page in the same directory as the current HTML page. | Click here for product info[product.htm] | Click here for product info |

bases are then replicated, through the firewall, to a Notes Server outside the firewall. This Notes Server then uses Web Publisher to publish the databases, and the Lotus web site is updated. Refer back to Figure 6 for an illustration of this process.

## Getting Started

Publishing your first Notes database is easy. Here's a quick checklist to get you started.

1. Insert the Web Publisher disk on your Notes Server machine and run A:\INSTALL.

2. When prompted, specify your Notes program directory. The Web Publisher server addin program files will be copied there.

3. When prompted, specify your Notes data directory. The Web Publisher configuration, log, and sample files files will be copied there.

4. When the install program is finished, add the following databases to your Notes Client desktop:

- WEBCFG (Web Publisher Configuration database)
- WEBLOG (Web Publisher Logging database)
- WEBGUIDE (online documentation)
- WEBSITE (the sample web site database)
- WEBKIT (toolkit of samples, tips, and techniques)

Web Publisher is pre-configured to publish the sample web site database (WEBSITE.NSF). However, global database publishing must first be enabled in the **Webmaster Options Document**.

1. Start your HTTP server.

2. From the Notes Server console, start Web Publisher by typing LOAD WEBPUB

3. From your Notes Client, open the Webmaster Configuration database

4. Find the Webmaster Options Document and edit it to set the **Publishing Enabled** option to "enabled".

5. Also in the Webmaster Options Document, change the **Output Directory for HTML files** options to match your HTTP server's base directory.

6. Now, save the document and Web Publisher will publish the sample database (WEBSITE.NSF).

Congratulations! You've just created your first web site!! Now that your web site is up, you can browse it using your web browser.

## Conclusions

Notes and InterNotes Web Publisher offer a powerful enterprise solution for rapidly creating and maintaining an enterprise web site. Lotus's Web site is published using Web Publisher. See **http://www.lotus.com/inotes/** for more information about InterNotes Web Publisher, including links to a few sites that are using the product, additional samples, tips, and techniques.

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